

H1 deviated from that which stands for a single crystal for the semiconductor.

Sub I4 5. (Amended) A device for sensing a light produced by a process comprising the steps of:

forming a blocking layer on an insulating substrate;

depositing a semiconductor layer on the blocking layer;

H2 forming a photoelectric conversion semiconductor device on said substrate, a semiconductor region of the photoelectric conversion semiconductor device comprising a p-type impurity semiconductor region, an intrinsic semiconductor region, and an n-type impurity semiconductor region; and

forming a thin film transistor for driving the photoelectric conversion semiconductor device over the substrate, an active layer of the thin film transistor comprises a source region, a drain region, and a channel region;

wherein said semiconductor regions are arranged in order with said p-type impurity semiconductor region adjacent said intrinsic semiconductor region and said intrinsic semiconductor region adjacent said n-type impurity semiconductor region in said photoelectric conversion semiconductor device, said order being in a direction perpendicular to that in which a light to be sensed is incident thereon, and

wherein the semiconductor region of the photoelectric conversion semiconductor device and the active layer of the thin film transistor comprises the same semiconductor layer.

Sub II 8. (Amended) A device for sensing a light comprising:

H3 a light sensor region and a semiconductor switch region adjacent to and operatively connected with said light sensor region over an insulating substrate,

wherein a semiconductor region of the light sensor region and an active region of the semiconductor switch region comprise the same semiconductor layer formed on a blocking layer located on the insulating substrate, and

wherein said semiconductor layer has at least one of an electron mobility 15-300 cm²/Vsec and a hole mobility 10-200 cm²/Vsec.

Sub
I7

9. (Amended) A device for sensing a light comprising:
a light sensor region and a semiconductor switch region adjacent to and
operatively connected with said light sensor region over an insulating substrate,
wherein a semiconductor region of the light sensor region and an active
region of the semiconductor switch region comprise the same semiconductor layer
formed on a blocking layer located on the insulating substrate, and
wherein a Raman spectrum of the semiconductor layer exhibits a peak
deviated from that which stands for a single crystal for the semiconductor, and said
semiconductor switch region comprises complementary p-channel and n-channel thin
film transistors

Sub
I11

15. (Amended) A device for reading an image comprising:
an image sensor region and a semiconductor switch region adjacent to and
operatively connected with said image sensor region over an insulating substrate,
wherein a semiconductor region of the light sensor region and an active
region of the semiconductor switch region comprise the same semiconductor layer
formed on a blocking layer located on the insulating substrate, and
wherein said semiconductor layer has a semi-amorphous structure
comprising a mixture of amorphous and crystalline structures, in which a Raman
spectrum of the semiconductor film exhibits a peak deviated from that which stands for
a single crystal of the semiconductor.

H6

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19. (Amended) A device for reading an image produced by a process comprising
the steps of:
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forming a blocking layer on an insulating substrate;
depositing a semiconductor layer on the blocking layer;
forming a photoelectric conversion semiconductor device on said substrate, a
semiconductor region of said photoelectric conversion semiconductor device comprising
a p-type impurity semiconductor region, an intrinsic semiconductor region, and an n-
type impurity semiconductor region; and
forming a thin film transistor on said substrate, an active region of the thin

film transistor comprising a source region, a drain region, and a channel region,
wherein the semiconductor region of said photoelectric conversion
semiconductor device and the active region of the thin film transistor comprise the same
semiconductor layer, and

wherein said semiconductor regions are arranged in order with said p-type
impurity semiconductor region adjacent said intrinsic semiconductor region and said
intrinsic semiconductor region adjacent said n-type impurity semiconductor region in
said photoelectric conversion semiconductor device, said order being in a direction
perpendicular to that in which an image to be read is incident thereon.

H6 *Sub I 17* 22. (Amended) A device for reading an image comprising:

H7 an image sensor region and a semiconductor switch region adjacent to said
operatively connected with said image sensor region over an insulating substrate,

wherein a semiconductor region of the light sensor region and an active
region of the semiconductor switch region comprise the same semiconductor layer
formed on a blocking layer located on the insulating substrate, and

wherein said semiconductor layer has at least one of an electron mobility 15-
300 cm²/Vsec and a hole mobility 10-200 cm²/Vsec.

Sub I 18 23. (Amended) A device for reading an image comprising:

H8 an image sensor and a semiconductor switch region adjacent to and
operatively connected with said image sensor region over an insulating substrate,

wherein a semiconductor region of the light sensor region and an active
region of the semiconductor switch region comprise the same semiconductor layer
formed on a blocking layer located on the insulating substrate, and

wherein said semiconductor layer has a semi-amorphous structure in which a
Raman spectrum of the semiconductor film exhibits a peak deviated from that which
stand for a single crystal of the semiconductor, and said semiconductor switch region
comprises complementary p-channel and n-channel thin film transistors.

Sub I 21 29. (Amended) A device for sensing a light comprising:

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a light sensor region and a semiconductor switch region adjacent to and operatively connected with said light sensor region over an insulating substrate,

wherein a semiconductor region of the light sensor region and an active region of the semiconductor switch region comprise the same semiconductor layer formed on a blocking layer located on the insulating substrate, and

wherein said semiconductor layer has at least one of an electron mobility greater than 15 cm²/Vsec and a hole mobility greater than 10 cm²/Vsec.

H¹⁰
31. (Amended) A semiconductor device comprising:

an insulating substrate;

a blocking layer on said insulating substrate;

first, second, and third semiconductor islands on said blocking layer;
p-type impurity regions in said first semiconductor island with a first channel region interposed therebetween and in a first region of said third semiconductor island;

n-type impurity regions in said second semiconductor island with a second channel region and in a second region of said third semiconductor island;

an insulating film on said first, second, and third semiconductor islands; and

first and second gate electrodes over said first and second channel regions, respectively, with said insulating film interposed therebetween,

wherein a Raman spectrum of each of said first, second, and third semiconductor islands exhibits a peak deviated from that which stands for a single crystal of the semiconductor.

Sub I²² 36. (Amended) A device comprising:

an insulating substrate;

a blocking layer on said insulating substrate;

first, second, and third semiconductor islands on said blocking layer;
p-type impurity regions in said first semiconductor island with a first channel region interposed therebetween and in a first region of said third semiconductor island;

n-type impurity regions in said second semiconductor island with a second channel region and in a second region of said third semiconductor island;

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I227

an insulating film on said first, second, and third semiconductor islands; and first and second gate electrodes over said first and second channel regions, respectively, with said insulating film interposed therebetween,

wherein said first semiconductor island has a mobility of 10-300 cm²/Vsec and said second semiconductor island has a mobility of 15-300 cm²/Vsec.

H11